

Claims

1. A method of embedding audio data of at least two audio data groups in an ancillary data space of a serial digital video data stream, comprising:

5 multiplexing the audio data groups to provide a serial multi-group audio data stream, and

inserting the serial multi-group audio data stream into the ancillary data space of the serial digital video data stream.

10 2. A method according to claim 1, wherein each audio data group consists of two audio data streams, and the method comprises multiplexing the audio data streams to provide said serial multi-group audio data stream.

15 3. Apparatus for embedding at least two audio data groups in an ancillary data space of a serial digital video data stream, comprising:

20 an embedder for formatting data of a first audio data group, generating data packets from the formatted data and inserting the data packets into the digital video data stream, and

25 an expansion device for formatting data of a second audio data group and supplying formatted data to the embedder,

and wherein the embedder generates data packets from the formatted data of the second audio data group and inserts the data packets into the digital video data stream.

30 4. A method of embedding ancillary data in an ancillary data space of a serial digital interface video stream, wherein each line of the video stream is composed of a horizontal ancillary data space followed by an active interval, said method comprising:

35 during the horizontal ancillary space of line n of the video stream, reading all data from a video FIFO, whereby at the start of the active interval of line n+1 of the video stream the video FIFO contains no data,

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during the horizontal ancillary data space of line n+1 of the video stream, reading all data from the video FIFO and inserting the ancillary data packet into the horizontal ancillary data space of line n+1, whereby at the start of the active interval of line n+2 of the video stream the video FIFO contains no data.

writing the first and second audio data streams into
respective FIFOs,

combining the data streams read from the FIFOs,
periodically testing depth of data in each FIFO, and
forcing the depth of data in each FIFO to a selected
value.

6. A method of embedding ancillary data in the horizontal ancillary data space of a serial digital video stream, wherein each line of the video stream is composed of a horizontal ancillary data space followed by an active interval, said method comprising:

receiving the input serial digital video stream,
detecting whether ancillary data is embedded in the
horizontal ancillary data space of the input serial digital
video stream.

if no ancillary data is embedded in the input serial digital video stream, embedding ancillary data in the serial digital video stream,

if ancillary data is embedded in the input serial digital video stream, operating either in a cascade mode or in an originate mode.

and wherein operating in the originate mode includes the step of embedding ancillary data in the horizontal ancillary

and operating in the cascade mode includes the step of embedding ancillary data in the serial digital video stream without overwriting data in the input serial digital video stream.

a disembedder for reading data packets of at least two groups from the digital video data stream, formatting packet-wise data of a first audio data group as sample-wise data and outputting the sample-wise data of the first audio data group, and

an expansion device for receiving packet-wise data of a second audio data group from the disembedder, formatting packet-wise data of the second audio data group as sample-wise data and outputting the sample-wise data of the second audio data group.